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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,777	12/01/2000	Hitoshi Sato	Y-176	8078

7590

10/24/2002

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EXAMINER

MOUTTET, BLAISE L

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,777

Applicant(s)

SATO, HITOSHI

Examiner

Blaise L Mouttet

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's amendment filed on June 20, 2002 has been entered and has overcome the prior rejection. A new rejection follows.

Claim Objections

2. Claims 1-6 are objected to because of the following minor informality in syntax:
- In claim 1, line 15, "filed" should read --filled--.
- Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1, 2, 4-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaki US 5,699,492 in view of Klassen US 5,515,479 and Albosta et al. US 4,908,638.

Karaki discloses, regarding claim 1, an ink jet recording method which receives a command and data which indicates a drawing of a thick line or a filled in area (column 2, lines 26-34), analyzes the command by an interpreter (column 2, lines 35-38), converts vector to raster data based on a given data pattern after the analysis (column 5, lines 40-50) and, based on the raster data, ejects ink drops from inkjet printer (3) comprising:

converting vector data of a thick or filled in line to raster data (column 5, lines 40-50);

before converting vector data to raster data, checking by an interpreter (15) whether the data pattern indicates solid-drawing in a thick line or filled in area for which drawing is indicated (column 4, lines 17-28).

Karaki discloses, regarding claim 7, an inkjet device comprising:

an interpreter (15) for analyzing a command and data which indicates the drawing of a thick line or a filled in area (column 4, lines 17-28);

means (17) for converting vector data of the thick line or filled in area into raster data based on a given data pattern after the analysis by the interpreter (column 5, lines 40-50); and

a recording head (3) for ejecting ink drops, based on the raster data while moving over a recording medium with a plurality of ink ejection nozzles arranged thereon (column 3, lines 41-45).

Karaki discloses, regarding claims 5 and 11, that the discriminated data is data for printing black ink (column 4, lines 17-28).

Karaki fails to disclose, regarding claims 1 and 7, a pattern changing means included in the interpreter (15) for checking if the data pattern specified to a particular thick line or filled in area indicates solid-drawing and if so changing the data pattern for that particular thick line or filled in area to a lower-density pattern.

Karaki fails to disclose, regarding claims 2 and 8, pattern changing performed by using a predetermined mask pattern from a mask table.

Karaki fails to disclose, regarding claims 4 and 10, that if the thickness of the line is less than a predetermined thickness no change is made to the data pattern even if solid drawing is indicated.

Karaki fails to disclose, regarding claims 1, 6, 7 and 12, that the method is performed in a single pass recording mode wherein bands printed by movement of the recording head correspond to a width of a recording portion of a recording head.

Klassen discloses, regarding claims 1 and 7, a pattern changing means (figure 1) for checking if a data pattern indicates high ink coverage and if so changing the data pattern to a lower-density pattern (column 2, line 66 - column 3, line 16).

Klassen discloses, regarding claims 2 and 8, the pattern changing performed by using a predetermined mask pattern from a mask table (from masking logic 42 as explained in column 7, lines 37-42).

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Klassen discloses, regarding claims 4 and 10, that if the density of an image is less than a predetermined density no change is made to the data pattern even if solid drawing is indicated (column 6, lines 3-6).

Albosta et al. discloses, regarding claims 1, 6, 7 and 12, that an inkjet recording method is performed in a single pass recording mode wherein bands printed by movement of the recording head correspond to a width of a recording portion of a recording head when high print speed is desired (column 4, lines 7-28, column 5, lines 61-66).

It would have been obvious for a person of ordinary skill in the art at the time of the invention to include the pattern changing means of Klassen in the interpreter of Karaki.

The motivation for doing so would have been in order to speed up processing time as taught by column 1, line 64 - column 2, line 2 of Karaki and reduce ink overloading as taught by column 2, line 66 - column 3, line 16 of Klassen.

It would have been obvious for a person of ordinary skill in the art at the time of the invention to utilize a single pass recording mode in the method and apparatus of Karaki.

The motivation for doing so would have been to achieve higher print speed as taught by column 5, lines 61-66 of Albosta et al.

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4. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaki US 5,699,492 in view of Klassen US 5,515,479 and Albosta et al. US 4,908,638, as applied to claims 2 and 8, and further in view of Mizutani US 5,774,146.

Karaki in view of Klassen and Albosta et al. fail to disclose choosing from a plurality of mask patterns the mask pattern appropriate to the recording medium.

Mizutani discloses choosing from a plurality of mask patterns the mask pattern appropriate to the recording medium in a printing device (column 5, lines 8-17, abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to choose from a plurality of mask patterns the mask pattern appropriate to the recording medium as taught by Mizutani in the apparatus and method of Karaki in view of Klassen and Albosta et al.

The motivation for doing so would have been in order to properly compensate for ink permeation into the recording medium by adjusting the printmask as taught by column 2, lines 4-18 and column 5, lines 8-16 of Mizutani so that a proper image can be formed.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Blaise Mouttet whose telephone number is (703) 305-3007. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

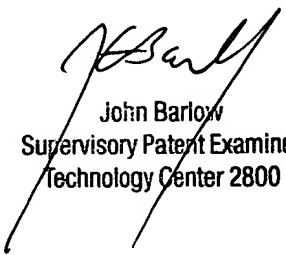
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow, Jr. Art Unit 2853, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Blaise Mouttet October 3, 2002

BM 10/3/2002


John Barlow
Supervisory Patent Examiner
Technology Center 2800